

March 14, 2003

1420 East 6th Avenue
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Division
Endangered Species Coordinator
Bozeman Office
Montana State Library, Helena
MT Environmental Information Center
Montana Audubon Council
Madison Conservation District
Madison-Gallatin Trout Unlimited, 1021 Nelson Road, Bozeman, MT 59718
U.S. Army Corp of Engineers, Helena
U.S. Fish and Wildlife Service, Helena
State Historic Preservation Office, Helena
Aquatic Design and Construction, Inc., P.O. Box 582, Livingston, MT 59047

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide funding for a stream channel restoration project on McKee Spring Creek, a tributary to Jack Creek in the Madison drainage. This proposed project is located on property owned by the Jack Creek Ranch near the town of Ennis in Madison County.

Please submit any comments that you have by 5:00 P.M., April 15, 2003 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. Completion of this project is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 444-2432. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
e-mail: mlere@state.mt.us

ENVIRONMENTAL ASSESSMENT
Fisheries Division

Montana Fish, Wildlife and Parks
McKee Spring Creek Channel Restoration and Wetland Enhancement Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. The Future Fisheries Improvement Program is proposing to provide funding for a project calling for the restoration of McKee Spring Creek by returning the stream to a meander pattern that approximates the historic channel. McKee Spring Creek, a tributary to Jack Creek in the Madison drainage, was channelized in the past for agricultural purposes, resulting in a nearly straight channel that has become entrenched over time. A series of ponds also have been excavated within the channel in an unsuccessful attempt to create fish habitat. This past work has created a simplified channel with very poor fish habitat. The intent of this project is to improve salmonid spawning and rearing habitat in the spring creek to enhance the recruitment of fish to the Madison River. An additional intent of the project is to reconnect the channel with the floodplain and re-establish riparian and wetland habitats. The project site is located on property owned by the Jack Creek Ranch approximately 4 miles northeast of the town of Ennis in Madison County (Attachment 1).

I. Location of Project: This project will be conducted on McKee Spring Creek located approximately 4 miles northeast of the town of Ennis within Township 5 South, Range 1 West, Sections 25, 26, 35, and 36 in Madison County.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six year operations plan for the fisheries program is to “restore and enhance degraded habitats” by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help meet this goal.

McKee Spring Creek was straightened and denuded of woody riparian vegetation in the past for agricultural purposes, resulting in an over-widened and entrenched channel with a riparian corridor that lacks woody shrubs. The channel was further degraded by excavating a series of 15 in-channel ponds in an unsuccessful attempt to create fish habitat. Additionally, adjacent wetlands were drained by a series of constructed ditches to enhance hay and livestock production. These past channel and wetland manipulations have created a poorly functioning channel that is inundated with silt. In most reaches, instream habitat is greatly simplified by a wide and shallow channel that lacks riparian cover. Currently, spawning and recruitment habitat is significantly limited for both resident and migrant species of fish.

III. Scope of the Project:

This project is being proposed to restore the dimension, pattern and profile of McKee Spring Creek by returning the channelized stream to a meander pattern that approximates the historic channel (Attachment 2). The project proposes to restore 13,600 feet of channel. The proposal calls for constructing a new Rosgen “E5” channel type adjacent to the existing channel. Material excavated from the new channel will be used to partially fill the old channel, creating a new wetland complex. Construction methods will involve excavating the new channel and floodplain to a point approximately 1 foot below the designed top of bank elevation and then placing salvage sod mats within the excavation in a manner that defines the new channel. Following stabilization of the newly created banks, additional channel excavation ranging from

0.5 feet in the riffle sections to 1.5 feet in the pool sections will be conducted to create proper dimensions and profile. Gravel will be placed into the bottom of the new channel for spawning habitat. The riparian corridor along the newly constructed channel will be planted with mature willow transplants (2 clumps per 100 lineal feet of channel), willow cuttings (1 stem per 1 foot of channel) and seedlings of willow, dogwood and Woods Rose (1 stem per 10 feet of channel). Although not directly associated with the proposed funding from the Future Fisheries Improvement Program, this project also calls for restoring adjacent wetland habitat by disabling the existing drainage systems, grading selected sites to increase habitat diversity and extensively planting woody shrubs and wetland vegetation. Areas disturbed during construction will be tilled and reseeded with a wetland seed mix. Following construction, restored wetlands and the riparian corridor will be fenced to prevent livestock access. Water gaps will be provided for livestock watering. This project is expected to cost \$963,000.00. Of this total, the Future Fisheries Improvement Program would be contributing up to \$25,000.00.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Restoring the existing ditched spring creek to a meander pattern and profile that resembles the pre-straightened historic channel is expected to create a more healthy habitat for aquatic life by creating much greater environmental complexity and by re-establishing better connectivity between the stream and riparian corridor. Expected improvements in the aquatic habitat should enhance salmonid recruitment to the Madison River, as well as resident populations in the stream. Habitat for riparian dependent wildlife would be improved by enhancing the riparian vegetative community, restoring adjacent wetlands and protecting the corridor with a riparian buffer.

2. Water quantity, quality and distribution.

Short-term increases in turbidity will occur during project construction. To minimize turbidity, construction will occur during a low flow period and operation of equipment in the stream channel will be minimized to the extent practicable. Excavation of the new channel will be conducted in the “dry” and completed in segments before water is turned in from the old channel. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 310 permit will be obtained from the local Conservation District and the U.S. Army Corp of Engineers will be contacted to determine the need for a 404 permit. In the long term, restoring the existing channel would reduce the sediment and nutrient contributions to downstream areas, thereby improving the overall quality of downstream waters.

3. Geology and soil quality, stability and moisture.

Soils along the stream margin would be disturbed during construction of the new channel, but would quickly stabilize following proposed re-vegetation efforts. Overall, the project is expected

to reduce bank erosion and improve channel stability by returning the stream to a natural meander pattern and by creating a buffer around the stream to protect the restoration effort.

4. Vegetation cover, quantity and quality.

Riparian vegetation and cover, primarily non-native grasses, would be disturbed during the period of construction. However, proposed extensive re-vegetation efforts, in conjunction with creating a protective buffer around the riparian corridor, would result in an overall improvement to the riparian vegetation.

5. Aesthetics.

Aesthetics would be negatively impacted during project construction due to ground disturbance and the presence of heavy equipment. The restoration work is expected to be completed over a period of 6 to 7 months. In the long term, aesthetics would be enhanced by restoring a channelized reach of stream to a healthier and more natural stream environment. The riparian vegetative community would be enhanced by re-vegetation efforts along the margins of the channel and by implementing a protective riparian buffer.

7. Unique, endangered, fragile, or limited environmental resources.

Spring Creeks are a valuable resource in Montana, providing a combination of clean, productive water, relatively constant temperatures and stable flows. This project calls for restoring a ditched spring creek to a more healthy and natural stream environment.

9. Historic and archaeological sites

The proposed project likely will require an individual Army Corp of Engineers 404 permit. Therefore, the State Historic Preservation Office will be contacted to determine the need for compliance with the federal historic preservation regulations. The project will not begin until a cultural clearance is granted.

VI. Explanation of Impacts on the Human Environment.

4. Agricultural or industrial production.

The project calls for creating a riparian buffer to protect the restoration effort resulting in the removal of approximately 50 to 100 acres from agricultural production.

7. Access to & quality of recreational activities.

The intent of the project is to improve recruitment of salmonids to the Madison River. As a result, the recreational fishery on the river is expected to improve. The project does not intend to provide a recreational fishery on the spring creek proper since the landowners currently do not allow public access to the stream.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, this unnamed spring creek will remain channelized and entrenched; resulting in a lowered water table, continued bank erosion, and simplified aquatic habitat. This altered stream will continue to provide only minimal recruitment of salmonids to the Madison River. Additionally, habitat for riparian dependent wildlife will remain in a degraded condition. Recreational opportunities associated with fish and wildlife resources will remain reduced and aesthetics will continue to be impaired.

2. Conduct habitat restoration within the existing channelized stream reach

This alternative would not resolve the entrenched nature of the existing channel nor would the alternative create additional stream length. Restoration efforts commonly fail when attempted in an entrenched channel due to the inability of the stream to access its floodplain. Confined flows in an entrenched channel commonly create excessive shear stresses that wash out installed habitat structures. Overall, entrenched channels tend to be unstable.

3. The Proposed Alternative

The proposed alternative is designed to restore the dimension, pattern and profile of a ditched spring creek. This alternative would greatly improve the diversity of aquatic habitat in the stream and would enhance the riparian community by intensive re-vegetation efforts and restoration of wetlands. The intent of the project is to improve spawning and rearing habitat and to improve the vegetation within the riparian corridor. This alternative would improve fish and wildlife habitat, aesthetics and water quality within the project area and would be expected to increase trout populations both in the spring creek and the Madison River.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA also will be published on Montana Fish, Wildlife and Parks webpage: fwp.state.mt.us.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on April 15, 2003.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer
Habitat Protection Bureau
Fisheries Division
Montana Department of Fish, Wildlife and Parks
1420 East 6th Avenue
Helena, MT 59620

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MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title McKee Spring Creek Channel Restoration and Wetland Enhancement Project

Division/Bureau Fisheries Division -Future Fisheries Improvement

Description of Project The Future Fisheries Improvement Program is proposing to provide funding for a project calling for the restoration of McKee Spring Creek by returning the ditched stream to a meander pattern that resembles the historic channel. This spring creek, a tributary to Jack Creek in the Madison drainage, was channelized in the past for agricultural purposes, resulting in a nearly straight channel that has become entrenched over time. The intent of the project is to improve salmonid spawning and rearing habitat to enhance recruitment of fish to the creek and to the Madison River. The project site is located on property owned by the Jack Creek Ranch near the town of Ennis in Madison County.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production			X			X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Madison Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office
 Individuals or groups contributing to this EA Aquatic Design and Construction, Inc.
 Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere
Date: February 26, 2003